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AUTHOR Loveridge, Robert L.; Carapella, Ruth
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ABSTRACT

This paper reports factors influencing developmental growth of disadvantaged 3- to 5-year-old preschool children in a Title I program at Euclid School, St. Louis, Missouri. A Preschool Academy was designed to serve 45 preschool pupils in an area served by two neighboring elementary schools. Pupils were divided into three groups and each group attended classes for two half-days each week. The short instructional week was adopted to facilitate the inclusion of an extensive parental instructional component. Parent instruction was provided through seminars, workshops, and in-home visits from the staff. Also, parents were required to participate in class activities through classroom observations, active classroom participation, and field trips. Biweekly, booklets were given to parents to assist them in working with their child at home. It was hypothesized that increased parental involvement in these activities would have a corresponding positive effect upon pupil developmental growth. Developmental growth was assessed for each pupil through the administration of a comprehensive achievement battery as a pretest and posttest. It was concluded that the preschool program was effective in increasing overall developmental growth. While parental involvement was substantial, it could in no way be tied to the positive developmental growth of these preschool children. (Author/RH)

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PARENTAL INVOLVEMENT IN PRESCHOOL EDUCATION: ASSET OR LIABILITY

Robert L. Loveridge, Ph.D.
Ruth Carapella, Ph.D.

St. Louis Public Schools
St. Louis, Missouri

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Presented at the 1979 Annual Meeting of The American Education Research Association, San Francisco, California, April 8-12, 1979

INTRODUCTION

Funding sources, both private and governmental, have shown an increased awareness and interest in determining the benefits of parental involvement in the educational process of their children. One of the Title I Components of the St. Louis Public Schools is a Preschool Academy for disadvantaged three to five year old children which incorporates a large parental component.

The Preschool Academy was piloted during the late spring of 1976, at Euclid School, and was implemented as a Title I component in the fall of that year. The 1977-78 school year represented the second full year of program operation. According to locally published guidelines the goals and purposes of the program are twofold: (1) to reduce or eliminate those deficits which prevent children from developing the skills that are needed to be successful in a formal school program by providing a program for three and four year old children designed to promote the development of cognitive, psychomotor, and affective skills of participating children, and (2) to foster in parents the skills necessary to supplement and reinforce pupil skill development.

The Denver Developmental Screening Test was used to identify children for program participation. Pupils who evidenced two developmental lags in language arts or who were unable to perform 50% of the items expected for their age level were accepted.

The Academy was designed to serve 45 preschool pupils in an area served by two neighboring elementary schools. Pupils were divided into three groups and each group attended classes for two half-days each week. The short instructional week was adopted to facilitate the inclusion of an extensive parental instructional component.

The three groups were arranged so that pupil instructional time comprised 60% of the school week, and the remaining 40% was devoted to planning time, staff inservice, and parent instruction. Parent instruction was provided through seminars, workshops, and in-home visits from the staff. Parents were also required to participate in class activities through classroom observations, active classroom participation, and field trips. Bi-weekly booklets were given to the parents to assist them in working with their child at home. Specific booklet activities for each child were indicated by the staff.

It was hypothesized by program developers that increased parental involvement in these activities would have a corresponding positive effect upon pupil developmental growth. Evaluation activities were planned to determine overall developmental growth of the child and the impact that parental involvement had on such growth.

Developmental growth was assessed for each pupil through the administration of a comprehensive achievement battery on both a pre and post basis. The battery examined ten areas of cognitive and psychomotor development. Analysis of developmental growth was analyzed from different perspectives to determine program effects. First, whether or not the program was more effective in remediating pupils of different levels of developmental deprivation. Second, whether or not the amount of parental involvement had a significant impact upon student growth in cognitive and psychomotor areas. Parental involvement was determined through: (1) staff maintained monthly logs, (2) a telephone survey of Preschool parents, (3) Preschool staff interviews, both formal and informal, and (4) classroom observations.

RESULTS

SECTION I: IMPACT OF THE INSTRUCTIONAL COMPONENT ON STUDENT ACHIEVEMENT

1. *There was significant developmental growth for pupils attending the Preschool Academy above what would be expected for the five months between pre and posttesting.*

Pupils attending the Preschool Academy were tested on a pre to post basis to determine the extent of developmental growth resulting from program participation. An Inventory of Skills Development (ISD), consisting of the six scales of the short form of the Pictorial Test of Intelligence (PTI) plus four additional scales and one supplemental scale* developed by the evaluators, was used to make this determination.

The pretest was administered during the first part of December, and the posttest was given during the first part of May; therefore, there was five months between test administrations. For this time period, a developmental gain of five months would be expected for the average child.

The distribution of scores attained by pupils on both the pre and post measures, along with their chronological and developmental ages at these testing times, is provided in Table I. Analysis of this table reveals that on the pretest 82% of the pupils evidenced developmental lag, i.e., a developmental age (DA) score lower than their chronological age (CA) score. On the posttest 70% of the students evidenced developmental lag, this represents a reduction of 12%. In addition, during the five months between testings 76% of the students evidenced a growth of six months or more, and 58% experienced nine months or more developmental gain (see Figure 1).

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*The evaluators felt the PTI did not adequately assess pupil knowledge in the area of numerical development, therefore, additional items were developed. When reporting numerical skill development the two scores were combined.

TABLE I

DISTRIBUTION OF CHRONOLOGICAL SCORES, RAW SCORES AND DEVELOPMENTAL AGE SCORES BY PRE AND POST-TESTING ON THE INVENTORY OF SKILLS DEVELOPMENT

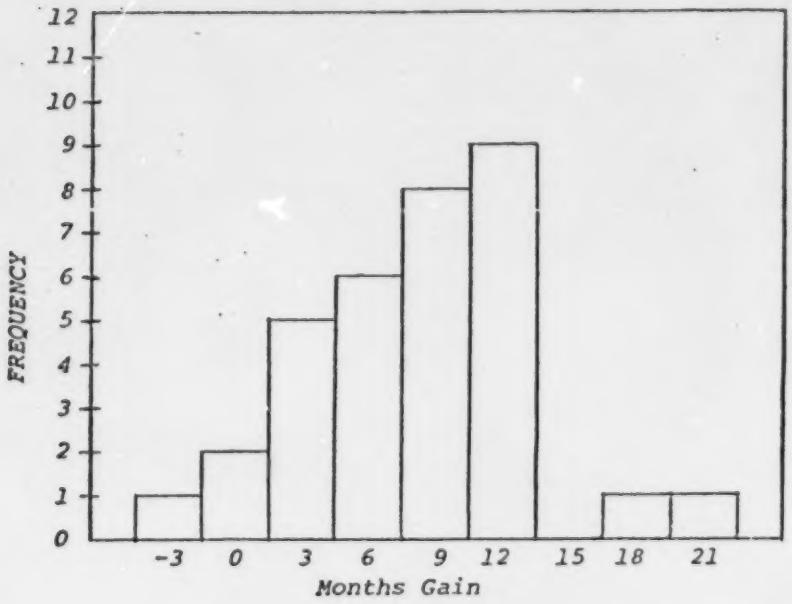
		PRETEST			POST-TEST	
	Pupil	CA	Raw Score	DA	CA	Raw Score	DA
GROUP I	1	4-1	59	3-3	4-6	75	3-9
	2	3-3	47	2-9	3-8	68	3-6
	3	4-7	80	4-0	5-0	95	4-6
	4	4-1	65	3-6	4-6	73	3-9
	5	4-0	80	4-0	4-5	94	4-6
	6	4-10	71	3-9	5-3	77	4-0
	7	5-2	104	5-0	5-7	103	4-9
	8	3-8	80	4-0	4-1	107	5-0
	9	3-6	67	3-6	3-11	77	4-0
	10	3-6	63	3-6	3-11	80	4-0
	11	5-1	57	3-3	5-6	97	4-9
	12	3-7	62	3-3	4-0	87	4-3
	13	3-6	63	3-6	3-11	69	3-6
GROUP II	*14	4-11	105	5-0	5-4	134	6-0
	*15	4-4	71	3-9	4-9	99	4-9
	16	4-0	66	3-6	4-5	114	5-3
	17	4-8	18	1-9	5-1	46	2-9
	*18	4-3	56	3-3	4-8	76	3-9
	19	3-10	55	3-0	4-3	58	3-3
	20	4-8	81	4-0	5-1	103	4-9
	*21	4-6	68	3-6	4-10	87	4-3
	22	4-1	51	3-0	4-6	73	3-9
	23	4-2	75	3-9	4-7	103	4-8
	24	5-0	69	3-6	5-5	95	4-6
GROUP III	25	3-4	32	2-3	3-9	61	3-3
	26	4-0	67	3-6	4-5	89	4-3
	27	3-11	63	3-3	4-4	67	3-6
	28	3-3	43	2-9	3-8	70	3-9
	29	3-11	69	3-6	4-4	90	4-3
	*30	3-5	33	2-3	3-10	53	3-0
	31	3-8	57	3-3	4-1	69	3-6
	32	4-0	47	2-9	4-5	55	3-0
	*33	5-1	72	3-9	5-6	94	4-6

CA - Chronological Age
DA - Developmental Age
* - Pupil also enrolled in Preschool previous year (1976-77)

The average developmental gain of pupils during the five month period was 8.3 months. Children who were enrolled in the Preschool Academy last year, as well as this year, and for whom both pre and post data were available, averaged a gain of 9.5 months for this period. Students who were enrolled in the Academy for this past year only evidenced a gain of 7.8 months.

FIGURE 1

DISTRIBUTION OF DEVELOPMENTAL GAIN SCORES ON THE ISD



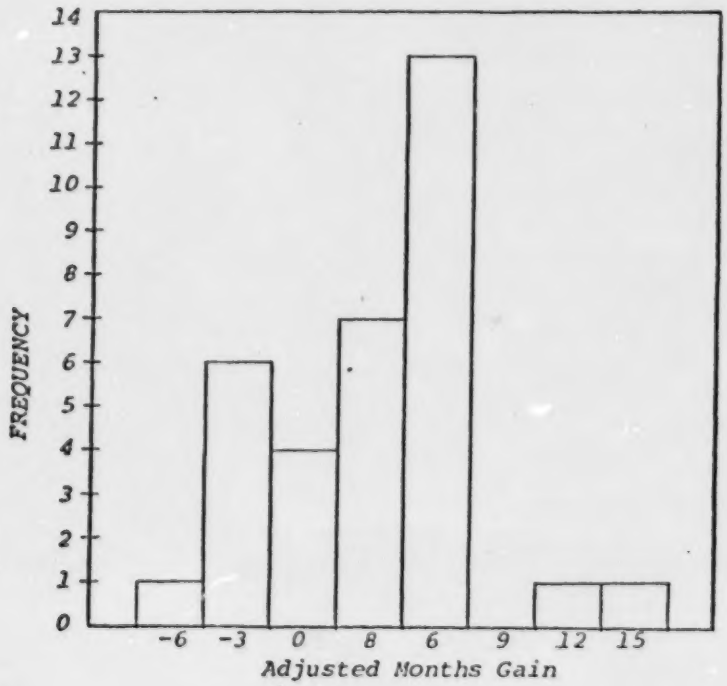
A control group of pupils against which the gains of the Preschool pupils could be compared was not available. Therefore, a comparison was made against expected gains for children of normal development.

Figure 2 shows developmental gains when scores were adjusted by subtracting the expected gain during the five months between testings. A correlated t test was performed to determine if the adjusted gain score was significant. The resultant t of 4.03 with 32 degrees of freedom was significant beyond the .001 alpha level.

The gains shown by preschool pupils represent a significant improvement over what would be expected if these students had not attended the Preschool Academy.

FIGURE 2

DISTRIBUTION OF DEVELOPMENTAL AGE GAIN SCORES
ADJUSTED FOR 5 MONTHS GROWTH



2. *The overall developmental growth of Preschool pupils was independent of initial student developmental classification.*

In an effort to determine which, if any, students benefited most from their participation in the Preschool Program, the 33 students of this study were classified according to degree of developmental deprivation. Figures 3, 4, and 5 provide a diagnostic profile of skill development for pupils in each of the three groups. Those students who were ten or more months developmentally below chronological age are shown with the darkest shading. Students who were developmentally from three to nine months below chronological age are shown with medium shading. Those who were two months or less below chronological age were not shaded. Pretest information is presented in the upper left triangle and posttest information is found in the lower right triangle of each rectangle.

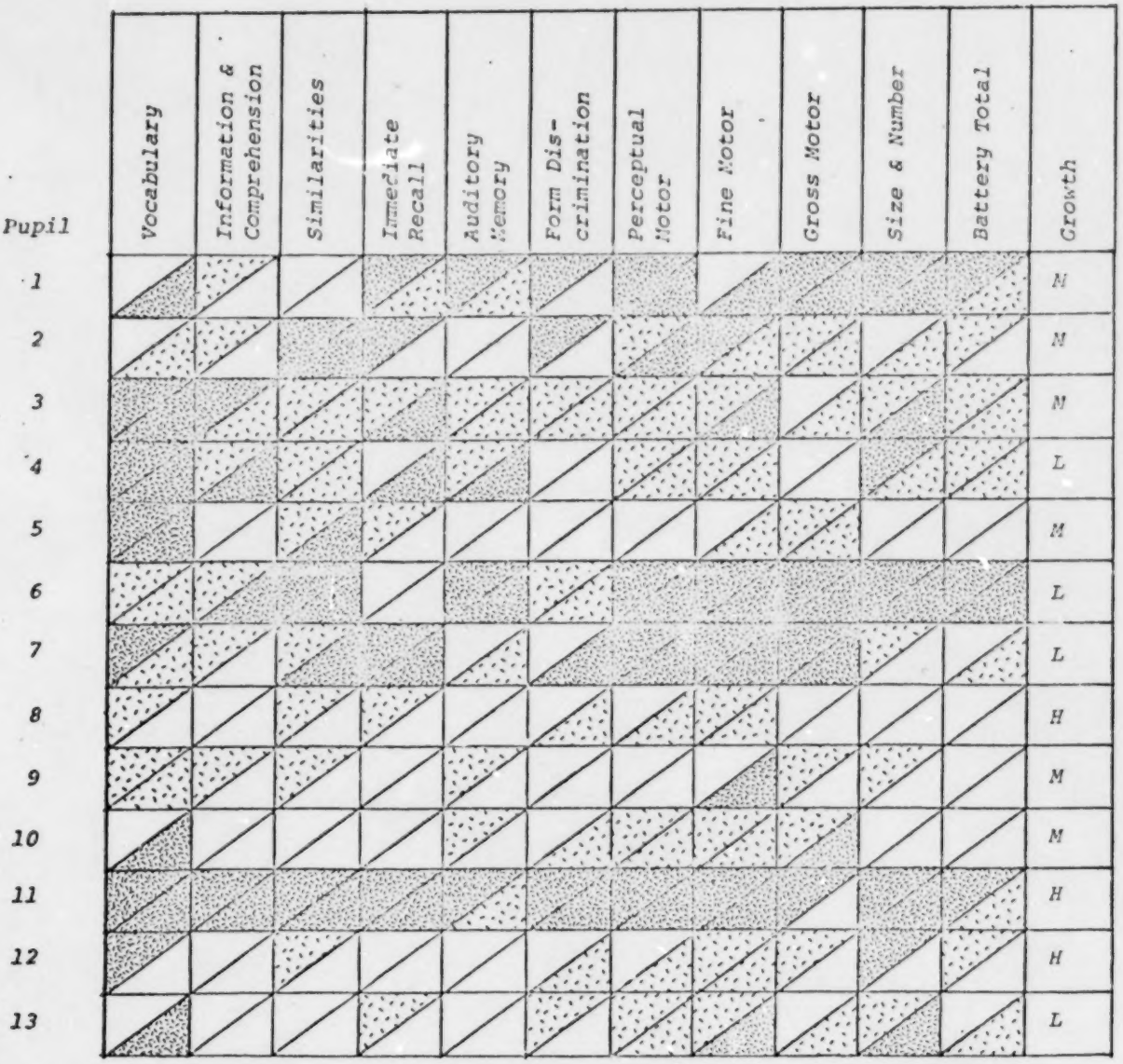
Students were also grouped according to the degree of developmental growth experienced during the five months between pre and posttesting. The low group was coded L and evidenced from zero to three months total growth. The average group evidenced four to nine months developmental growth, and was coded M. The high achievers demonstrated ten or more months of developmental growth and were coded H.

The distribution of student classification by developmental growth is shown in Table II. A Chi square statistic was computed to determine if the observed distribution of initial pupil classifications was significantly different from the expected distribution of students. The Chi square value of .79 with 4 degrees of freedom was not significant.

Therefore, the total developmental growth of participating pupils was independent of these students' initial classification; i.e., the Preschool program was equally effective for all classifications of students. Such independence shows that the growth which pupils achieved was not dependent upon the initial developmental deprivation of the pupils.

*FIGURE 3**

DIAGNOSTIC PROFILE OF SKILL DEVELOPMENT
GROUP I



*Developmental Deprivation **

= *10 or more months below CA*

= *3-9 months below CA*

= *0-2 months below CA*

Total Growth

L = 0-3 months gain

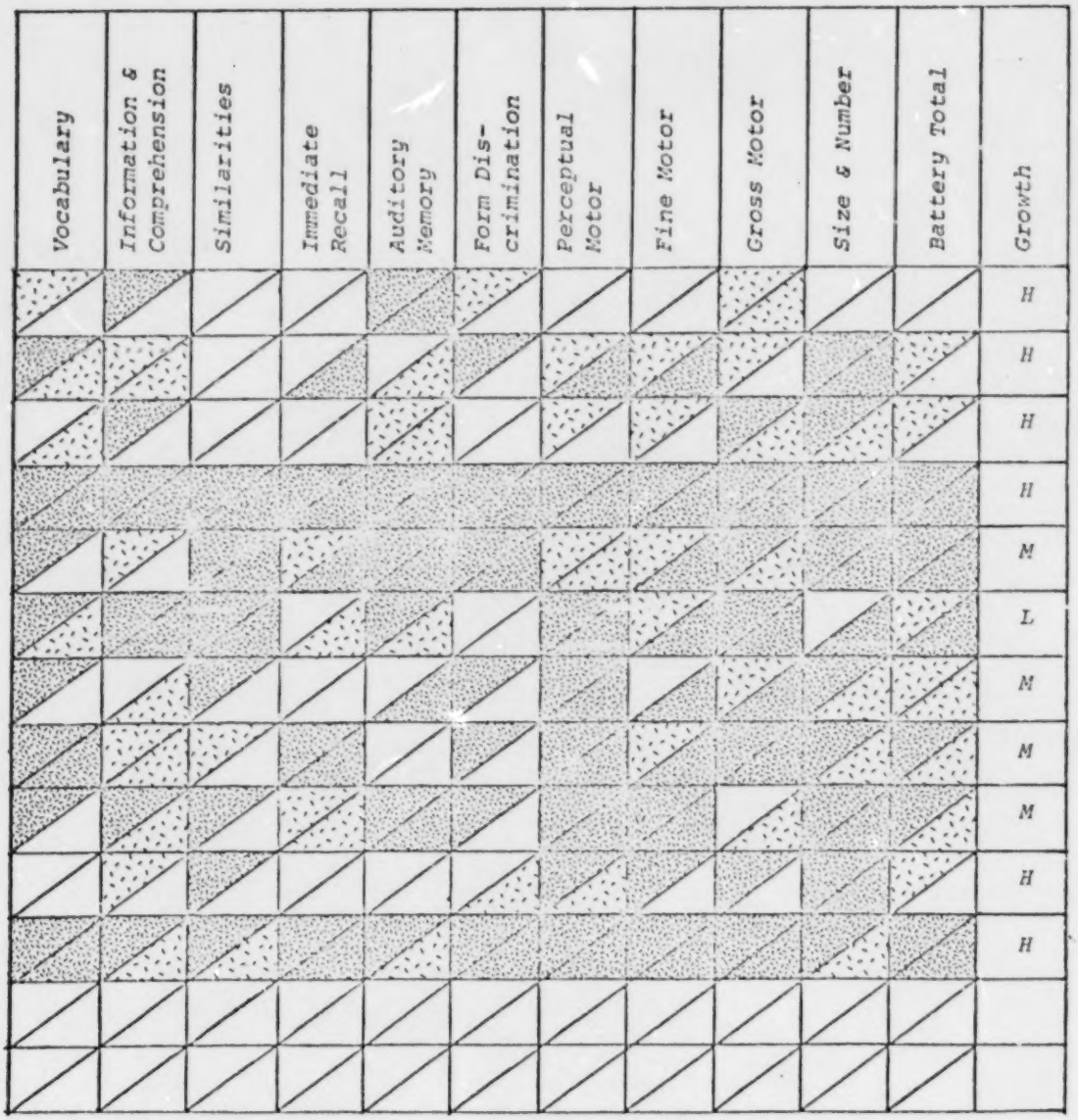
M = 4-9 months gain

H = 10 or more months gain

** In any rectangle: Upper triangle represents pretest information*
Lower triangle represents post-test information

*FIGURE 4**

DIAGNOSTIC PROFILE OF SKILL DEVELOPMENT
GROUP II



= 10 or more months below CA

= 3-9 months below CA

= 0-2 months below CA

L = 0-3 months gain

M = 4-9 months gain

H = 10 or more months gain

* In any rectangle: Upper triangle represents pretest information
Lower triangle represents post-test information

*FIGURE 5**

DIAGNOSTIC PROFILE OF SKILL DEVELOPMENT
GROUP III

= 10 or more months below CA

= 3-9 months below CA

= 0-2 months below CA

L = 0-3 months gain

M = 4-9 months gain

H = 10 or more months gain

* In any rectangle: Upper triangle represents pretest information
Lower triangle represents post-test information

TABLE II

DISTRIBUTION OF STUDENT DEVELOPMENTAL DEPRIVATION
BY DEVELOPMENTAL GROWTH

Initial Developmental Classification

Developmental Growth				Totals
Low (L)	2 (25%)	4 (50%)	2 (25%)	8 (24%)
Average (M)	6 (43%)	5 (36%)	3 (21%)	14 (42%)
High (H)	4 (36%)	5 (45%)	2 (18%)	11 (33%)
Totals	12 (36%)	14 (42%)	7 (21%)	33 (100%)

3. The Preschool Academy was more effective in the Cognitive Domain than in the Psychomotor Domain.

In an effort to determine which areas or skills were being impacted most by the Preschool Program the evaluators selected 28 items from the ISD for further analysis. These items were selected because they were representative of knowledge and skills found on other instruments used to test children of prekindergarten age (e.g., Denver Developmental Screening Test, Dallas Preschool Screening Test, Daberon, Dial).

The average gain on the 28 selected items was 3.64. Since the effects of maturation are unknown for these 28 items no test of significance can be reported. Analysis of these items indicated a trend toward increased development in the cognitive areas as opposed to the psychomotor areas (see Figures 6 and 7). Of the 28 items 19 or 68% tested cognitive skills and 9 or 32% tested psychomotor skills. The average gain of 2.97 on the cognitive items represented 82% of the total gains on these 28 items while the average gain of .67 represented 18% of the total gain on these items.

To further illustrate this point data presented in Table III show the percentage of students passing each of the 28 selected items for both the pre and posttest. Analysis of the data presented in this table show greater increases in the number of students able to pass selected items in the areas of Vocabulary, Information and Comprehension, Size and Number, and Auditory Memory than there were in the areas of Gross and Fine Motor.

The analysis of the 28 items prompted the evaluators to further examine pupil achievement in the cognitive and psychomotor areas. The evaluators selected the Vocabulary, Information/Comprehension and Size & Number subscales of the ISD as most representative of the cognitive area; the Gross Motor, the Fine

FIGURE 6

DISTRIBUTION OF COGNITIVE GAIN SCORES ON SELECTED ITEMS OF THE INVENTORY OF SKILLS DEVELOPMENT

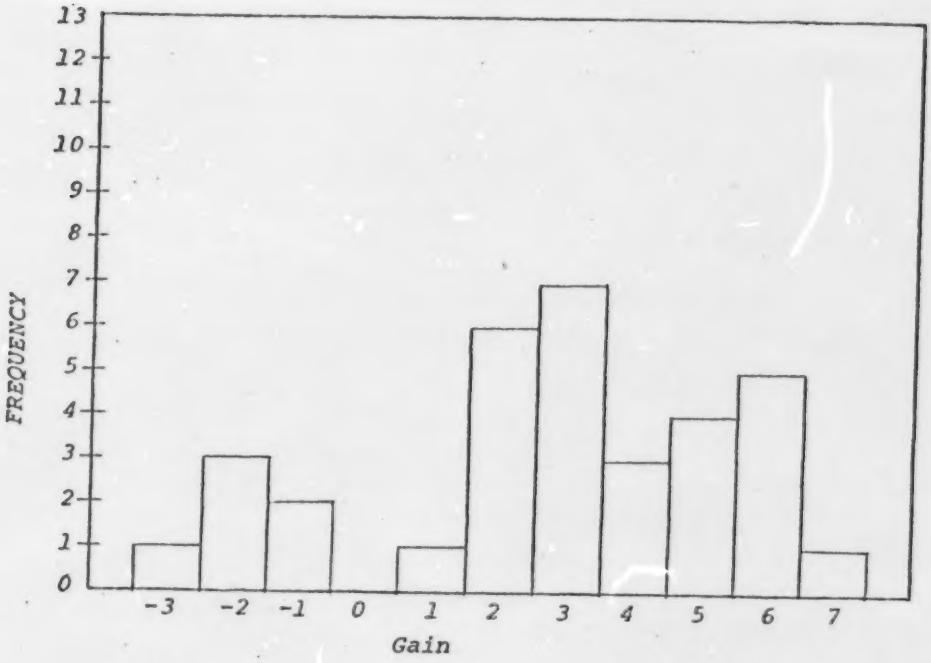


FIGURE 7

DISTRIBUTION OF PSYCHOMOTOR GAIN SCORES ON SELECTED ITEMS OF THE INVENTORY OF SKILLS DEVELOPMENT

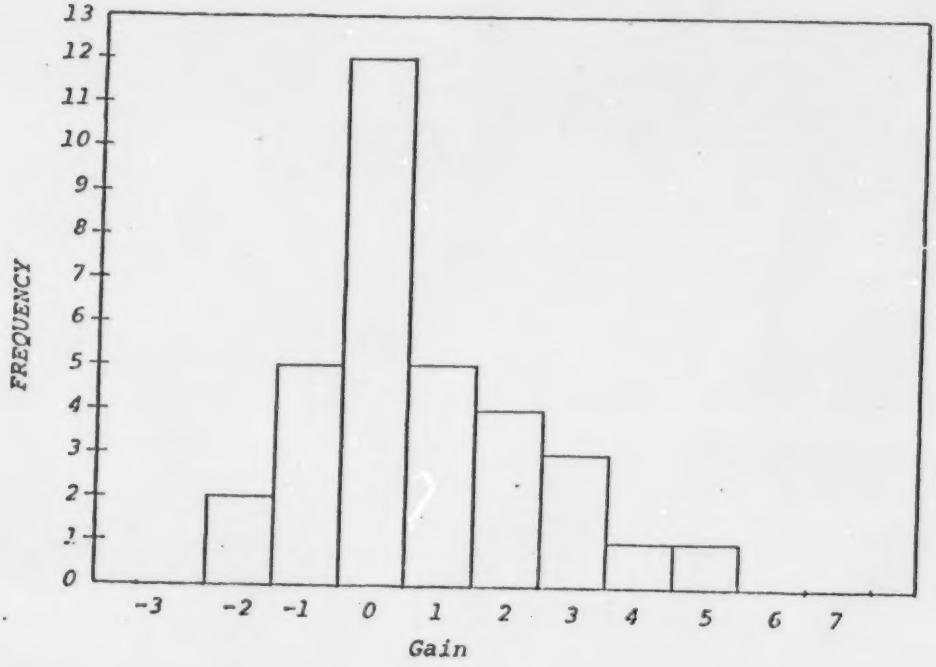


TABLE III

PRE & POST PERCENTAGES OF STUDENTS PASSING THE 28 SELECTED ITEMS

	VOCABULARY (Can Identify)						INFORMATION & COMPREHENSION (Can Identify)						AUDITORY MEMORY (Able To)	PERCEPTUAL MOTOR (Can)		FINE MOTOR (Can)				GROSS MOTOR (Can)			SIZE & NUMBER (Can)					
	Chair	Horse	Dessert	Cord	Weapon	Uniform	What Presses Clothes	What Tells Temperature	What We See With	What We Smell With	3 of 4 Colors (Red, Blue, Yellow, Green)	What Is Used With A Broom	Repeat A 4-Word Sentence	Match 6 Colors (Red, Yellow, Orange, Blue, Black, White)	Build Block Design To Model	Build A 3 Block Design	Draw A Circle	Draw Rotated 'T'	Draw Square	Catch Bounced Ball	Balance On 1 Foot 5 Sec.	Hop 2x	Identify Biggest Circle	Identify Shortest Line	Identify Same Size Objects	Identify Group With Most Objects	Count 5 Objects	Recognize A Group of 3
Pre	94	48	39	33	24	18	64	33	48	48	36	18	67	85	64	91	58	39	9	52	52	76	97	55	15	48	36	18
Post	88	61	52	24	61	33	76	55	70	67	67	24	94	100	91	100	58	36	24	52	58	88	97	70	18	82	52	42

14

16

17

Motor and the Perceptual Motor were selected as representative of the Psychomotor area.

Table IV shows the number of upward and downward shifts for each of the subscales. In the cognitive areas an upward shift or reduced developmental deprivation was evidenced in 36 cases while there were 16 cases where increases in developmental deprivation or downward shifts occurred. On the other hand the three areas representing the psychomotor domain exhibited an upward shift in 18 cases and a downward shift in 25 cases*.

TABLE IV

DEVELOPMENTAL SHIFTS ON THE TEN SUBSCALES OF THE ISD†

	Cognitive Areas							Psychomotor Areas		
SHIFTS	VOC	IC	SN	FD	SIM	IR	AM	GM	FM	PM
UP	11	14	11	11	9	8	8	10	4	4
DOWN	6	4	5	7	4	6	8	6	12	7

If the total battery is used, the remaining four subscales are probably more representative of cognitive rather than psychomotor areas. When all subscales are used an upward shift is shown in 72 cases and 42 cases show a downward movement thus strengthening the findings that the Preschool Academy was more effective in the cognitive area than in the psychomotor.

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*Developmental shifts can be determined for each student from Figures 3, 4, and 5. The top portion of each rectangle provides prescore information, the lower portion posttest data.

†This information was extracted from Figures 3, 4, and 5. These figures provide information for individual students on each of the ten subscales of the ISD and the total battery, indicating the extent of deprivation on a pre-post basis. A reduction in developmental deprivation is evidenced by a change in shading from darker pre to lighter post. An increase in developmental deprivation is shown on these figures by a change in shading from a lighter pre to a darker post. The figures are also coded to indicate each pupil's developmental growth classification.

4. *Total developmental growth was independent of the number of developmental delays as determined by the Denver Developmental Screening Test (DDST).*

In an effort to determine whether total developmental growth was related to the severity of the developmental handicap as determined by the DDST, the 31 students for whom data were available were separated by total developmental growth (see Figures 3, 4, and 5) and the number of developmental delays on the DDST. The information relative to this distribution is shown in Table V.

TABLE V

DISTRIBUTION OF DEVELOPMENTAL LAGS BY DEVELOPMENTAL GROWTH

Developmental Growth	Denver Developmental Delays				
	0	1	2	3 or more	Totals
Low (L)	1	3	2	1	7
Average (M)	6	4	3	1	14
High (H)	3	2	3	2	10
Totals	10	9	8	4	31

A Chi square was computed to determine if the observed frequency differed for developmental growth were significantly different from the expected value. A Chi square value of 2.14 with six degrees of freedom was not significant. Therefore, overall growth in the Preschool Program was independent of the initial number of developmental delays on the DDST.

SECTION II: THE PARENTAL COMPONENT AND ITS IMPACT ON STUDENT ACHIEVEMENT

1. *Parental involvement in all specified activities was less than required by programmatic guidelines.*

Parents or caretakers of Preschool pupils, were required by program design, to attend three workshops or seminars each month and to participate in one classroom observation and/or service session per month. In addition, a member of the Preschool staff was expected to visit each pupil's home at least two times each month.

For the eight month period from October 7, 1977 through June 2, 1978, a total of 24 workshops and/or seminars should have been conducted. During this period 22 workshops were held, and, in addition, 8 field trips for parents and pupils were provided. Attendance records show that 86% of the students had parents or caretakers in attendance. Information on the number of parents meeting the program objective for attendance at seminars and workshops was compiled for any month wherein two or more workshops or seminars were held and these data are presented in Table VI.

TABLE VI

MONTHS IN WHICH TWO OR MORE WORKSHOPS WERE HELD
AND PARENTS MEETING OBJECTIVES DURING THESE MONTHS

Month	Number Workshops Held Per Month	Number of Parents Attended All or 3 Per Month	% of Parents Meeting Objectives
October	3	6	20
November	2	9	30
December	2	6	20
January	3	1	3
February	4	7	23
March	3	0	0
May	3	5	17

Most parents (92%) did not attend seminars or workshops in conformance with guideline stipulations; whether this was due to lack of interest or inability to attend is unknown.

During the eight month period from October through May, for the 30 parents of the 33 pupils in the study, the number of expected observations was 240. The actual number of observations for these parents during this period was 273, for an average of 1.1 parent observations per month. While this figure suggests the objective was being met, multiple observations made by some parents distort for any given month the actual number of parents meeting the objective. Table VII displays data showing that during any given month the actual number of parents who met the objective ranged from 8 (26.7%) to 16 (53.3%). This means that on the average 37.3% of the parents were making the required one observation per month. Thirty percent of the parents met the objective at least six of the eight months.

TABLE VII

NUMBER OF PARENTS MEETING OBSERVATIONAL OBJECTIVES BY MONTH*

	Months							
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May
No. of Parents Meeting Objectives	14	16	11	15	16	8	10	23
% of Parents Meeting Objectives	46.7	53.3	36.7	50.0	53.3	26.7	33.3	43.3

A total of 462 visits should have been made to the homes of Preschool pupils during the period of October, 1977 through April, 1978. A total of 272 home visits, averaging twenty minutes each, were made by the staff of the Preschool Academy. This number represents 58.9% of the expected number of home visits for the children in this study.

Analysis of teacher records revealed approximately 50% of the time visits were made when persons other than the parents were at home. Teachers reported that in some cases persons contacted had little or no knowledge of the Preschool or its purposes, and time spent going over materials and skills served little purpose. Records also indicated that in some instances visits were made to different people each time thus reducing continuity of home instruction.

Although not specified as a requirement in programmatic guidelines, staff members regularly prepared and distributed workbooks containing supplementary curricular activities. Booklets, containing such activities, which pupils were to complete under parent or caretaker supervision, were distributed bi-weekly to the pupils' homes by the Preschool staff. The primary purpose of the booklet was to provide parents an opportunity to work with their child in specific skill areas. During home visits, the staff was to instruct parents in the use of educational materials to extend and reinforce school experience.

Results of a parent survey indicated this booklet was well received. Forty-seven percent of the responding parents reported they worked through each page with their child, 61% assisted the child with those pages designated by staff members as helpful to their child, and 32% reported they had older brothers and sisters work through the booklet with the child. Five percent of the parents permitted the child to work through the booklet on his/her own. All parents reported the booklet was used in some fashion.

It would appear that the effort expended in the preparation of this booklet was appreciated. Yet, it should be noted there was no systematic attempt made by the staff to objectively determine the effects of parent/child interaction on specifically marked skills.

2. *Increased parental involvement had no positive effect on the overall developmental growth of Preschool pupils.*

The proposal for the Preschool Academy states that the program is designed to help parents provide "the kind of intellectually stimulating environment for children that will promote their maximum, emotional, and social growth." To promote such growth classes, seminars, and field trips were scheduled for parents. Opportunities were also arranged for parents to observe their children in the school setting or to provide assistance in the classroom. In addition, conferences between parents and Preschool staff were conducted throughout the school year.

A summary of parent participation in each of these activities as shown by the level of student developmental growth is shown in Table VIII.

TABLE VIII

AVERAGE TOTAL PARENT PARTICIPATION IN WORKSHOPS, CLASSROOM OBSERVATIONS, FIELD TRIPS, CONFERENCES, AND HOME VISITS BY STUDENT DEVELOPMENTAL GROWTH CLASSIFICATION

Parent Participation

	Workshops	Classroom Observations	Field Trips	Conferences	Home Visits
Low (L)	6.0	12.9	2.6	11.4	7.4
Average (M)	6.9	11.5	3.4	11.4	8.8
High (H)	5.8	6.3	3.5	9.1	8.2

It can be observed that the average number of workshops attended by the parents or caretakers of Preschool pupils did not differ in any meaningful manner for pupils in any of the three developmental growth levels. An increase in participation by parent and caretakers who accompanied Preschool pupils on field trips, seemed to be associated to some degree with those children who had higher developmental growth.

There was no pattern relating increased visits to pupils' homes by Preschool staff members to the overall developmental growth of pupils. However, it should be noted that parents or caretakers of children who made the most developmental growth, had substantially fewer classroom observations and conferences than either of the other groups. From the data presented in Table VIII it would appear that the more the parent came to the school to observe or to sit in conference with the teacher the less the child achieved. Staff testimony further supported the argument that increased parental contact through observation and conferences may have had a detrimental effect upon student achievement. During conversations with the staff it was reported that in selected cases parents were asked not to come to school during class time because the staff felt their presence had a negative effect upon their child/children's performance.

Since total growth was independent of both initial developmental deprivation and the number of developmental delays (see Section I, points 2 and 4), there is no reason to expect that the nature or number of conferences and observations should be different for any of the three levels of developmental growth.

The data presented in Table VIII appeared to be contrary to the Preschool Academy assumption that increased parental involvement would increase student growth. A correlational analysis was done on actual student gains on the ISD to the number of parent initiated contacts by activity*. As can be seen in Table IX, as the number of parent contacts increased, there was a corresponding decline in total pupil achievement. These data force one to reject the hypothesis that increased parental involvement in activities as now structured in the school setting results in increased student growth.

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*Home visits were excluded because this activity was staff initiated.

TABLE IX

CORRELATION OF NUMBER OF PARENT CONTACTS
BY ACTIVITY TO PUPIL ACHIEVEMENT GAINS

Workshops	Observations	Field Trips	Conferences	Total Contacts
-.26*	-.36 Ψ	-.14	-.24*	-.32†

* $p < .20$

† $p < .10$

Ψ $p < .05$

Because we rejected the above hypothesis, tests were performed to determine if parental involvement had any impact on student achievement. It can be seen from the information presented above that four of the correlations were significant at an alpha level of .20, two were significant at an alpha level of .10, and one was significant at an alpha level of .05.

According to Winer[ξ] "When type I and type II errors[ζ] are of approximately equal importance, the .30 and .20 levels of significance may be more appropriate than the [traditional] .05 and .01 levels". For these reasons it was felt that for this analysis the .20 and .10 levels of significance were more appropriate than .05 and .01 alpha levels (although one correlation was significant at the .05 level). We felt the determination of potential parental impact upon achievement was the most critical issue.

[ξ] Statistical Principles in Experimental Design, 2nd Ed., McGraw Hill, 1971, p.14.

[ζ] Type I errors occur when the researcher rejects a true hypothesis. For example, rejecting the hypothesis of no parental impact when parental impact does occur. Type II errors occur when the researcher accepts a false hypothesis. For example, accepting that impact makes no difference when indeed impact does make a difference.

While these findings do not mean that all types of parental involvement would be ineffective in increasing pupil achievement, they do imply, that before present strategies to involve parents are further implemented, consideration should be given to revising the present structure of the parent component. While attempts to involve parents in the education of their child are to be commended, it should be obvious that the present strategies of the Preschool Program are ineffective, (i.e., Workshops, observations, field trips, and conferences).

DISCUSSION OF FINDINGS

On the basis of information obtained, it was concluded that the Preschool Program was effective in increasing overall developmental growth of enrolled pupils. Results indicated that developmental growth, as determined by the Inventory of Skills Development (ISD), was independent of initial developmental classification on either the selection instrument or pretest placement. In addition, the program appeared to be more effective in remediating deficiencies in the cognitive domain than those in the psychomotor domain.

Parental involvement in all scheduled parent activities was substantial. However, the impact of parental involvement could in no way be tied to the positive developmental growth of these preschool children. In fact, for certain parental activities, significant negative correlations were found between increased parental involvement and pupil achievement.

Efforts to involve parents in the educational process of their child are laudable but in light of the results of this evaluation, it was recommended to program developers that: (1) the nature and the purpose of parental involvement should be thoroughly reexamined; (2) more time should be allocated for the pupil

instructional component; and (3) more attention and time should be given to activities in the psychomotor areas.

While it is not known why increased parental involvement had such a deleterious effect upon pupil achievement, the fact that negative correlations were found indicates a need for additional research in this area. Research on the effects of parental involvement on student achievement may be of particular importance when programs involve disadvantaged children. It may be that the involvement of parents, from disadvantaged backgrounds, in the instructional process of their children, also disadvantaged, may work against effective remediation.